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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,281	10/10/2001	Hiroshi Ogi	YAESU.58527	1269

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EXAMINER	
VU, THAI	

ART UNIT	PAPER NUMBER
2687	

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/975,281	OGI ET AL.	
	Examiner	Art Unit	
	Thai N Vu	2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 October 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 2* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Meszko et al. (U.S. Patent #: 4,654,885; hereinafter Meszko).

Regarding claim 1, Meszko teaches a method of constructing a composite receiving band filter in a radio transmission/receiving device in which the same communication frequency band (FIG. 1, the single low-pass filter 14, decides the frequencies coming in or going out of the system) is used for transmission and receiving modes, a low-pass filter (FIG. 1, low-pass filter 14) for preventing a discharge of higher harmonics is arranged between an antenna and a transmission circuit under the transmission mode, and a band filter (FIG. 1, combination of low-pass filter 14 and high pass filter 20) corresponding to said communication frequency band is arranged between the antenna and the receiving circuit under the receiving mode (column 2, line 49-column3, line 4), wherein:

the low-pass filter (FIG. 1, low-pass filter 14) setting a cut-off frequency for an upper limit frequency of said communication frequency band (column 2, lines 53-56) is connected to said antenna (FIG. 1, low-pass filter 14 connected to antenna 12); a high-

pass filter (FIG.1, high-pass filter 20) setting a cut-off frequency for a lower limit frequency of said communication frequency band (column 2, lines 61-64) is connected to a signal input terminal of said receiving circuit (FIG. 1, high-pass filter 20 connected to receiving circuits 26 and 28); a switch circuit (FIG. 1, switch 16) for connecting said low-pass filter to a signal output terminal of said transmission circuit (FIG.1 transmitter 30); under the transmission mode and connecting said low-pass filter to said high-pass filter under receiving mode is provided (FIG. 1) and

a band filter comprising a serial circuit of said low-pass filter and said high-pass filter is composed under the receiving mode (FIG.1, combination of low-pass filter 14 and high-pass filter 20; and column 2 line 64-column 3, line 37).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al. (U.S. Patent #: 6,343,221; hereinafter Toda) in view of Meszko and Hjorring (U.S. Patent #: 4,447,909; hereinafter Hjorring).

Regarding claim 2, Toda teaches method of constructing a composite receiving band filter in a radio transmission/receiving device in which one band is selected from a plurality of communication frequency bands (column 1, lines 26-31) under transmission

and receiving modes, a low-pass filter (FIG. 3, LPFs 651, 652) for preventing a discharge of higher harmonics is arranged between an antenna and a transmission circuit under the transmission mode (FIG. 3, ANT 1), and a band filter corresponding to the selected communication frequency band is arranged between the antenna and a receiving circuit under the receiving mode (FIG. 3, BPFs 601, 609), wherein:

a first switch circuit (FIG. 3, SW64) for connecting only a low-pass filter corresponding to the selected communication frequency band to said antenna (FIG. 3, LPFs 601, 609 connected to ANT 1 via SW64) is provided between each low-pass filter setting a cut-off frequency for an upper limit frequency of said each communication frequency band and said antenna (a low-pass filter is a device that stops frequencies above a desired frequency from passing through called cut-off frequency) ;

It should be noticed that Toda fails to teach the step of a second switch circuit for connecting only a high-pass filter corresponding to the selected communication frequency band to a signal input terminal of said receiving circuit is provided between each high-pass filter setting a cut-off frequency for a lower limit frequency of said each communication frequency band and said receiving circuit. However, Hjorring teaches: the step of a second switch circuit (FIG. 1, S1) for connecting only a high-pass filter (FIG. 1, High-pass filter HP1) corresponding to the selected communication frequency band to a signal input terminal of said receiving circuit (FIG. 1, receiving circuit stating with demodulator Dem1) is provided between each high-pass filter (FIG. 1) setting a cut-off frequency for a lower limit frequency of said each communication frequency band

and said receiving circuit (column 2, lines 37-41), for the purpose of correcting the false lock-in due to noise if noise is detected.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the step of a second switch circuit for connecting only a high-pass filter corresponding to the selected communication frequency band to a signal input terminal of said receiving circuit is provided between each high-pass filter setting a cut-off frequency for a lower limit frequency of said each communication frequency band and said receiving circuit, as taught by Hjorring, in view of Toda, in order to avoid a redundant structure having different transceiver circuits for different frequency bands.

It should be further noticed that Toda fails to teach the step of a third switch circuit for connecting said low-pass filter to said transmission circuit under the transmission mode and connecting each low-pass filter to each high-pass filter under receiving mode is provided between said each low-pass filter and said each high-pass filter of which communication frequency bands mutually correspond. However, Meszko teaches the step of a third switch circuit (FIG. 1, switch 16) for connecting said low-pass filter (FIG. 1, low-pass filter 14) to said transmission circuit (FIG. 1, transmitter 30) under the transmission mode and connecting each low-pass filter to each high-pass filter (FIG. 1, high-pass filter 20) under receiving mode is provided between said each low-pass filter and said each high-pass filter of which communication frequency bands mutually correspond (column 2, line 49-column 3, line 37), for the purpose of preventing harmonics from corrupting the signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the step of the step of a third switch circuit for connecting said low-pass filter to said transmission circuit under the transmission mode and connecting each low-pass filter to each high-pass filter under receiving mode is provided between said each low-pass filter and said each high-pass filter of which communication frequency bands mutually correspond, as taught by Meszko, into view of Toda and Hjorring, in order to in order to avoid a redundant structure having different transceiver circuits for different frequency bands.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai N Vu whose telephone number is 703-305-3417. The examiner can normally be reached on 9:00AM-7:00PM, M-F (every other Fri. off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 703-306-3016. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thai N. Vu
Examiner
Art Unit 2687

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10/15/04
LESTER G. KINCAID
PRIMARY EXAMINER